ABSTRACT

An ice thickness/drifting velocity observation of sea
ice by using an ice thickness measurement sonar and a current
meter moored into the sea and a sea ice observation by a
high-resolution airborne SAR are synchronously performed, a
correlation between a draft profile of sea ice passing over
the sonar and an SAR backscattering coefficient profile is
calculated, and an ice draft of desired sea ice is calculated
from the relational expression and an SAR backscattering
coefficient. As the SAR backscattering coefficient, a
backscattering coefficient of L-band HV polarization may be
used. A backscattering coefficient of X-band VV polarization
is preferably used as the SAR backscattering coefficient to
detect thin ice having a thickness of not more than approximately
10 cm.